

Themes for a National Heritage Area in the Sacramento-San Joaquin Delta

PROPOSAL May 2011

As part of a feasibility study for a National Heritage Area (NHA), it is necessary to develop NHA themes. Themes can be the connecting element of resources in the region that are used to tell the unique stories of the place. In 2010, input on Delta NHA themes was solicited from local stakeholders via interviews and an interactive public workshop. Numerous creative ideas were suggested during these activities. For a detailed explanation of these processes and outcomes, please see 'Interpretive Themes and Resources for a National Heritage Area in the Sacramento-San Joaquin Delta' at: http://www.delta.ca.gov/res/docs/Delta_NHA_Themes_Memo.pdf. The proposed themes in this memo represent a synthesis of ideas from the public process. These themes were developed to be broad enough to incorporate a diversity of the proposed ideas, yet succinct enough to tell a unique story of the Delta's heritage. As National Park Service NHA guidelines recognize, all of an area's stories cannot be told, and NHA themes must emphasize the area's national significance.

After public review and subsequent modification, this document will be incorporated into the Delta NHA feasibility study. Input from local stakeholders is highly encouraged. Interested persons can email comments to Alex Westhoff of the Delta Protection Commission at alex.westhoff@delta.ca.gov or call (916) 776-2290, no later than July 15th, 2011. This document will be discussed at a public meeting which will be scheduled for mid-July, 2011.

Introduction

The Delta lies in the heart of California and has been a vibrant center of diverse habitats, communities, industries, innovations, infrastructure, and activities throughout its existence that are of distinctive significance locally, regionally, statewide, nationally and internationally. The unique resources of the Delta have attracted persons from throughout the world to utilize and shape the landscape in remarkable ways.

During the last 10,000 years, a rapid rise in sea level following the last ice age inundated the alluvial valley of the Sacramento River forming the landscape now known as the Delta. The confluence of the Sacramento and San Joaquin Rivers formed a system of freshwater and brackish marshes and from there spread a variety of habitat types: grasslands, seasonal oak woodlands, oak woodland-savannah, chaparral, and riparian, which were incredibly rich with wildlife. Native American groups inhabited the Delta, including the Wintun, Maidu and Miwok, but most died of introduced diseases prior to European settlers. Early explorers visited the

Delta in the 18th and 19th centuries, and fur traders such as Jedediah Smith trekked into the region due to the abundance of wildlife such as otter, mink and beaver.

The Gold Rush era (1848-1855) is recognized as being the time when the Delta was ‘discovered’ as tens of thousands of persons traveled its waters on their way from San Francisco to the Sierra Nevadas, and began to recognize the fertility of the Delta’s soils and the high potential for agricultural production. Reclamation began during the 1800’s, and the extensive system of marshland was converted to a predominantly agricultural landscape, which the Delta remains today.

The five proposed NHA themes go into further detail about unique stories of the Delta’s heritage, incorporating a broad spectrum of topics, both historic and contemporary, centered around the nationally-significant aspects of the Delta’s natural and cultural heritage.

Theme 1

America’s Inland Delta at the Heart of California

The vast size, unique shape, and geographical location of the Delta have contributed to its importance as an ecological and cultural landscape. The Delta is a rural region that lies in between major urban centers of northern California, and has often been used as an area for leisure activities for those wanting an escape from city life. While suburban sprawl has threatened the Delta landscape, innovative solutions, such as the Delta Protection Act, have helped preserve the Delta’s rural character.

The sheer size and distinctive shape of the Delta are landscape features which are unmatched anywhere in the world. The Bay-Delta region is the largest estuary on the West Coast of the Americas, and the second largest estuary in the United States, next to the Chesapeake Bay. The Delta’s flat landscape covers about 1,000 mi², and is the only inland Delta in the United States, often referred to as an ‘inverse Delta’ as the enclosed bay is at the mouth and the deltaic formation spreads inland. The Delta serves as the confluence of five rivers: Sacramento, San Joaquin, Mokelumne, Cosumnes, and Calaveras, and has a vast watershed, covering about 40% of California’s land area. The large size of the Delta, and its key geographical location make it an important ecological home, and an essential corridor for a vast diversity of flora and fauna. It is a key stopover location along the Pacific flyway for a wide variety of bird species. It is also an important corridor for anadromous fish, such as Chinook Salmon and Steelhead, who transfer large quantities of ocean nutrients into inland ecosystems. The rivers have supported the second largest salmon run on the west coast (excluding Alaska) and the site of the first Pacific Coast Salmon Cannery is in West Sacramento.

The Delta was heavily used as a corridor during the Gold Rush, due to its prime location between the San Francisco Bay and the Sierra Nevadas, and thousands of forty-niners traveled its rivers on some of the finest steamboats in America. After the Gold Rush era, steamboats

continued to travel the waters regularly, for recreational purposes. The Delta today remains a prime location for outdoor recreation. Its 1,100+ miles of unique waterways provide opportunities for boating, wakeboarding, windsurfing, fishing, birdwatching, and more, to persons who want a leisurely retreat from urban centers that lie adjacent to it (the San Francisco Bay Area, Sacramento, and Stockton), as well as to Delta locals.

Due to the Delta's location between major Northern California population centers, its flat and open terrain, and its resources such as water and natural gas, it has served as an important conduit for infrastructure to help support the Bay Area and Central Valley communities, and serves a critical role in the international import and export of goods. Hundreds of miles of infrastructure corridors cross the Delta including power transmission lines, gas pipelines, aqueducts, state highways, railroads, and deep water ship channels.

However, due to the Delta's close proximity to large urban centers, suburban sprawl has been a major threat for quite some time. In the early 1990s, it was identified that the valuable resources of the Delta including agricultural land, habitat, potable water and recreational waterways were being threatened by urban development stemming from peripheral areas. To help put a halt to this problem, the Delta Protection Act of 1992 was developed, which delineated a Primary and a Secondary Zone of the Delta. The Primary Zone is the area in which urban development is extremely limited, and includes approximately 500,000 acres of waterways, levees, and farmed lands, extending over portions of five counties: Solano, Yolo, Sacramento, San Joaquin and Contra Costa. The Delta Protection Act is a unique approach to large scale protection of a valuable multi-resource landscape.

Subthemes: Vast size of Delta, inverse shape of Delta, vast watershed, confluence of large rivers, Pacific flyway, anadromous fish, Gold Rush corridor, steamboat travel, recreational haven, infrastructure corridor, rural area in between massive urbanization, suburban sprawl, Delta Protection Act

Theme 2

From Marshland to Farmland - Reclamation of the Delta

The significant undertaking of reclaiming the Delta from a tule marsh to an agricultural landscape was one of the largest scale reclamation projects in the United States. Innovative equipment was developed in the Delta for reclamation, and used throughout the world for a variety of purposes. Reclamation, however, led to land subsidence, gaining widespread attention from scientists and policy makers.

In 1850, the Swamp and Overflow Land Act conveyed ownership of all swamp and overflow lands from the federal government to the State of California, and shortly thereafter, most of California's marshes were privately owned, which included almost all of the land in the Delta.

The legislature formed a Swamp Land Commission and authorized reclamation districts to be formed and therefore a separate governmental entity was developed on each Delta island.

During the reclamation era, many of the large oak trees were cut down, and tule marshes disappeared as people began to cultivate the soil for farming. The first stage of reclamation was done primarily by Chinese laborers. No larger mass of human labor was working by hand on any single project in the world, except the Suez Canal. However, it was obvious at these early stages that peat soils were not adequate levee material, and the material shrank when it dried up, which resulted in cracks being formed or levees washing away completely.

In the 1870's the side-draft clamshell dredge was developed specifically for building levees in the Delta and surrounding areas, which were steam powered and collected soil from alluvial channels. It was during this era that entrepreneurs in California invented and introduced the world to an entirely new system of dredging which far surpassed previous systems. The clamshell dredge won out over competing machines as they were quicker than other types and generally cheaper to manufacture. Between 85 and 90 clamshell dredges have been built for levee construction in the central part of California, and continue to be used for repair and maintenance of Delta levees. Additionally, equipment developed for Delta reclamation has been used throughout the world for a wide variety of purposes such as assisting with construction of the Panama Canal, deepening the San Francisco Bay and tributaries, dredging coral for outpost construction during World War II in several Pacific Islands, and reclaiming the Tulare Lake Basin.

Around 1,100 miles of levees were built in the Delta, which protect farmland from inundation, but also protect the water quality and supply for the millions of Californians who are dependent on it. Reclamation of the Delta was certainly a notable effort, but along with it has come the unintended consequence of land subsidence, which is caused by oxidation of organic carbon in peat soils due to drainage for agriculture, and large areas of many islands are now around 15 feet below sea level. Subsidence has increased stresses on the levee system, which has led to concern about the stability of the Delta region, especially after the Hurricane Katrina catastrophe, and has gained wide-spread attention from policy makers and politicians. It has also lead to innovative scientific experiments in the Delta on how to slow or reverse subsidence through the use of tule decay.

Subthemes: Swamp and Overflow Land Act, reclamation districts, early reclamation, clamshell dredge, levee protection, land subsidence, subsidence reversal experiments

Theme 3

Multi-Cultural Contributions and Experiences in Rural California

A number of minority groups, including Chinese, Japanese and Filipinos, have established communities in the Delta and made significant contributions into shaping the Delta into the

agricultural landscape that it is today. Often the successful farm laborers were able to acquire land, which led to statewide and national concern about immigration issues. A handful of historic communities in the Delta reflect the region's diverse heritage.

People of many different ethnic backgrounds have worked closely together since reclamation to make the Delta one of the most productive agricultural regions in the United States. Several ethnic minority groups have established communities in the Delta including Chinese, Japanese, Filipinos, East Indians, Mexicans, Portuguese, and Italians. Chinese immigrants were involved with all aspects of reclamation and without their labor it would likely have taken decades longer to develop the Delta into such a rich agricultural area. The Delta likely had the largest population of Chinese tenant farmers in California, and Chinese-American farmers have maintained a continuous presence for over one and a half centuries in the Delta, though populations have declined in recent years. Around 12,000 Chinese originally came to the area to work on the transcontinental railroad. When that project was completed in 1869, many were put to work building the first set of Delta levees using wheelbarrow brigades, and other work including tule removal and plowing. Once the land was farmable, many Chinese remained as tenant farmers and also provided essential labor in the Delta canneries.

A number of historic Chinese districts still remain in the Delta. The town of Locke is the only town which was built and inhabited exclusively by and for Chinese in the United States, and became a symbol of the Chinese contribution to the nation and the importance of Chinese to California's agriculture. Locke is a National Historic Landmark and a National Register Site. Walnut Grove and Isleton also have historic Chinese districts on the National Register, and Isleton has an annual Asian celebration to honor the town's diverse heritage. The towns of Courtland and Rio Vista contain historic Chinese architecture and surrounding cities of Sacramento and Stockton both have historic Chinatowns.

Japanese immigrants began arriving to California in the 1890s and a large number came to the Delta. Contributions to Delta agriculture from Japanese-Americans included high quality control standards, and successful practices which led towards large-scale agriculture. Their aggressive and hardworking attitudes often helped them to purchase land and make significant progress economically which resulted in a widespread anti-Japanese attitude. Due to the concern that Japanese were dominating some of the 'very best lands in California,' the map of 'Oriental Land Occupation' was produced which brought attention to the large amount of land in Northern California, with particular high concentration in the Delta, that was owned or leased by Asian-Americans. This map was used to gain support for a 1920 state law that forbid even the leasing of land by Japanese, which led to other states enacting similar laws, and a 1924 federal law banning Japanese immigration. During World War II, people of Japanese ancestry were sent to internment camps, therefore eliminating the Delta's Japanese population. Historic Japanese communities remain in the Delta, specifically in Walnut Grove's and Isleton's Japanese historic districts, which are both on the National Register.

Stockton was home to the largest Filipino community outside of the Philippines during the 1930's and 1940, mainly farmworkers from the Delta and greater Central Valley. The Little Manila neighborhood was the center of Stockton's Filipino community, and was home to a number of Filipino labor leaders, who were behind the success of the United Farm Workers, led by Cesar Chavez. While sections of the neighborhood have been bulldozed by the city, unprecedented efforts by the local community have succeeded in preserving some of the historic buildings. In 2003 the district was named on the nation's 11 Most Endangered Historic Places by the National Trust for Historic Preservation.

Subthemes: Chinese contributions to reclamation, Chinese labor in farms and canneries, Locke, Delta Chinese historic districts and buildings, Japanese contributions to agriculture, anti-Asian legislation, Delta Japanese Historic Districts, Little Manila neighborhood

Theme 4

This Fertile Land - California's Cornucopia

The Delta is recognized as one of the most fertile agricultural regions in the country, contributing billions of dollars to the California's economy. Large quantities and a vast diversity of crops have been grown in the Delta and exported throughout the world, and the Delta has also been an innovative center for farm equipment development.

Due to the high fertility of the Delta's peat soils, the high water table, and an available water supply, the Delta has been an extremely productive agricultural region since reclamation. Water is pumped directly from Delta channels for irrigation, and some of the 'trademark' Delta crops have been Bartlett pears, asparagus, sugar beets and Irish potatoes. A large number of other specialty crops have been grown in the Delta including peaches, plums, cherries, tomatoes, beans, onions, peas, celery, corn, spinach, hemp, wine grapes, olives, blueberries, and more. Produce from the Delta has been shipped throughout the nation, and throughout the world for quite some time. The Bartlett Pear market was at its peak around World War 1, at which point almost 50% of all Bartletts were produced in California, mainly in the Delta. Some of the Delta's pear trees are over 100 years old, making it the oldest pear growing region in California. Until 1930, the Delta was known as the asparagus capital of the world, growing 90% of the world's supply, for shipment throughout the United States as well as to Africa, Europe and Asia. From the beginning, crops were produced for export, with waterways serving as early 'highways' to transport goods to Sacramento for the mining communities, and San Francisco for shipment overseas. Later railroads and trucking were utilized to transport crops. Large corporations such as Del Monte, National Cannery, Sun Garden, Heinz Pickle, Libby McNeil, Patt Low and Golden State established canneries in the Delta.

Due to the high agricultural productivity of the Delta, it was an innovative region of equipment invention which revolutionized American farming. Benjamin Holt of Stockton, invented several pieces of agricultural equipment, most notably the Caterpillar tractor which had tracks instead

of wheels to alleviate the problem of tractor wheels getting stuck in the peaty Delta soils. This design was used throughout the world, for a variety of purposes, such as developing machines that helped end World War I, tumble the Berlin Wall, build the Hoover Dam, tunnel under the English Channel and help to construct cities across the United States. Other notable equipment was invented in the Delta including a beet harvester, the first bean harvester, the asparagus ripper, the asparagus plow, and a number of other plows, discs, backhoes, cultivators, and subsoilers. Many of these inventions, were used throughout the U.S.

Agricultural remains the dominant land use in the Delta today, and land use tools are utilized by Delta counties to preserve the agricultural landscape. Activities in the Delta such as seasonal flooding and working landscapes projects, have ensured that farmland can also support wildlife habitat. Recent agritourism initiatives have helped to further enhance the economic value of Delta agriculture, and to educate the surrounding urban populations about its importance.

Subthemes: Agricultural practices, specialty crops, shipment and export, canneries, equipment invention, agricultural conservation, wildlife habitat on farmland, agritourism

Theme 5

Our Precious Water Resource - California's Hub of Water Conveyance and Conflict

The Delta is as a water supply source for about two-thirds of California's residents and over seven million acres of the state's farmland. Two major water projects, the Central Valley Project and the State Water Project, transfer water from the Delta to Southern California. Surrounding issues have led to perhaps one of the most complex resource challenges that California has ever faced.

Water transferred from the Delta plays a crucial role in sustaining the state of California, the world's eighth largest economy. Two-thirds of California's precipitation falls in the northern part of the state, while Southern California is home to two-thirds of the state's population. As groundwater and surface water supplies were not sufficient to irrigate the San Joaquin Valley and Tulare Basin, state, federal and local governments engaged in efforts, over the course of decades, to develop a plan to take water from wetter parts of northern California to the agricultural and urban users of the south. In 1933, during the depths of the Great Depression, the federal government authorized the Central Valley Project (CVP). This led to pumping from the Delta through the Delta Mendota Canal and diversions from the San Joaquin River, which began in 1951. The CVP is the largest, and probably most controversial, water purveyor in California. Implementation of the project, led to a significant loss in freshwater wetlands in the Central Valley, as more land was converted to agriculture. Dams and reservoirs were constructed for the project, which blocked salmon and steelhead from reaching their native spawning grounds. It altered the timing and flow of California's major river systems, which along with pumping, has had further consequences for anadromous fish, and other native fish species, leading to their decline.

However, the 7 million acre-feet of water from the CVP did not end up being enough for the agricultural needs, as well as the increasing number of municipal and industrial users. Therefore another project, the State Water Project (SWP), was developed which also created an integrated system of dams and canals. Most of this project's water was pumped from the southern Delta into the California Aqueduct to supply water for some San Joaquin Valley farms, as well as Southern California Municipalities. Construction began in the late 1950's, with major funding approved in a 1960 bond measure. The bond measure was the largest in the nation's history (authorizing the sale of \$1.75 billion in general obligation bonds), and was voter approved in 1960 by the narrowest election in the state's history. Pumps were installed at Clifton Court in the Southern Delta in 1960, and water flowed through the California Aqueduct to the south. The SWP remains the world's largest publicly built and operated water and power development and conveyance system.

An additional proposal surrounding Delta water supply was the peripheral canal in the early 1980's, which was opposed by voters on a ballot initiative in 1982. This canal would have more directly linked the northern and southern units of the CVP and SWP, but would dramatically alter Delta flows.

The water diversions of the CVP and SWP have had significant environmental impacts. River flows and water quality have declined, and native Delta fish species have plummeted to record lows at times. Federal attention has been given towards declining fish species, which resulted in legal actions to restrict water export from southern pumps. A consensus based program, called CALFED, was developed to bring opposing parties together, but ended up collapsing for a variety of reasons. New governance structures, such as the Delta Stewardship Council, have recently been introduced in order to craft a plan to reconcile long time conflicts between water uses, habitat values and other Delta resources. Complex issues surrounding water resource management in the Delta have been a central focus of policy makers in California for decades.

Subthemes: The Central Valley Project, the State Water Project, water infrastructure, impacts of water diversions, water management and policies

For more information on the feasibility study for a National Heritage Area in the Sacramento-San Joaquin Delta, please see: <http://www.delta.ca.gov/heritage.htm>